

the investigation of which I would particularly recommend to persons visiting Aldabra.

Mr. Salmon states that the male shows himself to be annoyed when the female is disturbed, and there is no doubt that he exhibits affection for her, as was especially evident on board the steamer, when he tried to break out of his cage as soon as he got sight of the female, who was transported in a separate cage. The circumstance that the two animals are a pair, increases the chances in favour of their being kept alive for a lengthened period. And they will be well worth all the care we can bestow on them, as it is extremely doubtful whether we shall ever succeed again in obtaining a pair of full-grown examples. The male is without doubt the largest and most powerful individual of its race, far exceeding in size any of the few other individuals kept in the Seychelles. Nor is it likely that in Aldabra itself a similarly large example should have succeeded in evading the search of the numerous crews which have landed there.

From the historical evidence given above, it is evident :

1. That the presence of the Gigantic Tortoises at two so distant stations as the Galapagos and Mascarenes cannot be accounted for by the agency of man, and therefore that these animals must be regarded as indigenous.

2. That, although frequently transported by the early navigators to distant and apparently suitable localities (Sandwich Islands, Masa Fuero, and Ceylon), they never established themselves permanently, but there is no evidence to show whether this failure is due to an innate inability of the species to become acclimatised when far removed from its native place, or to the destructiveness of the inhabitants of those localities.

3. That the different islands of the Galapagos group were inhabited by distinct races.

4. That possibly the animals even of so small a group as Aldabra were differentiated in the different islands.

5. That although these animals are still lingering in the Galapagos and Aldabra their numbers are yearly diminishing, and that their growth to perfect maturity is interrupted; that with respect to the races of the Galapagos Tortoise, the elucidation of the indistinctive characters and original distribution, we are, and probably shall be, dependent chiefly on the materials already preserved in zoological museums.

6. That the Tortoises of Mauritius and Rodriguez are entirely extinct. It is probable that in some museums shells, or even entire animals of these once so numerous races exist, but it will be a matter of great difficulty to trace their origin; therefore our examination is limited at present to the osseous remains transmitted from the Mauritius and Rodriguez.

ALBERT GÜNTHER

(To be continued)

NOTES

WE are glad to hear that both a zoological and botanical collector will form part of the retinue of the Prince of Wales, in his approaching visit to India.

DR. VOGEL (not the photographer of that name), the Director of the newly established "Sonnenwarte" of Berlin, is now in this country.

THE rate of propagation of the recent inundation waves in the south of France has been determined along the banks of the Garonne. It was found to have been no more than two miles an hour in a run of 140 miles in the district where the principal calamities occurred. The consequence is that an immense amount of property and life could have been saved if a system of warnings had been adopted. Wise as usual after the event, the authorities intend to establish such a system as is already in operation at Lyons for the Rhône, and at Paris for the Seine. In an article in the July number of *Symons's Monthly Meteorological Magazine*, on the French floods, is an interesting calculation which will give Londoners some idea of what a "flood" means. Sup-

posing we had a flood in the Thames, it would cover on the south bank, the whole of Battersea Park, Lambeth, Southwark, Bermondsey, and Deptford; and on the north bank, Fulham, Chelsea, Brompton, Belgravia, Westminster, and St. James's Park; while, as for the new embankment, a steamer might ply over the top of it.

IT is suggested that the unusual violence of the floods on the continent are attributable not only to the abnormal amount of rain and the sudden melting of snow and ice in the mountain districts, but also to the increasing destruction of forests which is taking place in nearly every country. For some years past the violence of the spring and summer floods has been increasing, and it is remarkable that this increase in their force is contemporaneous with the gradual extinction of forests and woodlands. The existence of forests has a great effect in equalising the distribution of water, and in checking the too rapid melting of snow and ice under the influence of the summer heat. At the same time the growth of timber on hill sides prevents the rapid flow of surface-water which takes place where trees do not exist. The question of maintaining forests, instead of destroying them, without making provision for the future, is one which demands the serious attention of the governments of every country, and particularly of those countries where, by the existence of hills and mountains, and consequently rapid rivers, the liability to floods is increased.

WE have been informed that during the recent very bad weather there has been an unusual number of icebergs met with in the North Atlantic, and that fogs in Labrador and Newfoundland have been extraordinarily severe and frequent. It is to be hoped that some general inquiry into the recent peculiar weather and its accompaniments will be instituted; no doubt valuable results would be obtained.

THE Austrian Commission to the International Geographical Exhibition has intimated that they intend to present to the French Geographical Society all the books they are exhibiting. As this example will, we are informed, be followed by other Commissions, a magnificent Geographical Library will be one of the results of the meeting of the Congress.

THE work of the Sub-Wealden Exploration is temporarily arrested at 1,672 feet from increasing deposit from the sandy beds. The original problem was dependent on the opinion of geologists that palæozoic rocks would be found at a depth varying from 700 to 1,700 feet. So far, however, the strata are mesozoic; but the latest fossils give some indications of a palæozoic rock. Much hope is therefore entertained of solving the problem.

PARTS 19 to 24 of the quarto work published by authority of the Lords Commissioners of the Admiralty, on the Zoology of the Voyage of H.M.S. *Erebus* and *Terror*, conclude the descriptions of the Mammalia by the late Dr. J. E. Gray, F.R.S.; the Birds by Mr. R. B. Sharpe; the Reptiles by Dr. A. Günther, F.R.S.; and the Insecta by Mr. A. G. Butler. Part 20 is by Mr. E. J. Miers on the Crustacea, and Part 21 by Mr. E. A. Smith on the Mollusca.

THE Rev. E. Ledger, M.A., rector of Duxford, Cambridgeshire, was yesterday elected to the Gresham Professorship of Astronomy in the City of London. Mr. Ledger was a Carpenter and Beaufoy Scholar of the City of London School, and afterwards Fellow and Lecturer of Corpus Christi College, Cambridge. He was fourth Wrangler in 1863, and also University Scholar of the University of London.

AN International Horticultural Exhibition and Congress is to be held in Amsterdam in 1876, similar to the one held in Florence last year. A strong committee has been appointed,

who desire the co-operation of the various horticultural societies throughout Europe in making the undertaking as complete and successful as possible. The President is to be Mr. J. H. Krelage, and the Secretary Mr. H. Groenewegen.

MR. THISELTON DYER, in consequence of his recent appointment to Kew, has resigned the Professorship of Botany at the Royal Horticultural Society.

DR. HOFFMANN, of Giessen, contributes an interesting article on the influence of inland-water on the vegetation of shorelands to the *Oesterreichisches Landwirtschaftliches Wochenblatt* of July 10. His object is to prove that large bodies of water tend to produce an equable climate, and that a large percentage of heat and light is due to the reflected rays of the sun from the surface of the water. To illustrate his argument he selects that part of the river Rhine which flows from east to west, from Biebrich to Niederwald, where the northern bank more particularly in the immediate vicinity of the water produces the best grapes in Germany. Moreover, he states that the fogs rising from the water in the month of May protect the tender shoots of the vine from being injured by late frosts. This, at any rate, does not agree with our experience in this country.

It is stated that, in consequence of pressure of business, the Government is not likely to be in a position, during the present session, to return any final answers to the applications for aid made on behalf of King's College, London; Owens College, Manchester; the University College of Wales; and other educational bodies throughout the country.

LORD ABERDARE has been elected President of the Social Science Association for the ensuing year.

IN a pit about half a mile east of Erith Railway Station, where an old and deserted bed of the Thames is excavated for brick earth, and which has yielded the bones of two species of British elephant and one of lion, Dr. Gladstone, F.R.S., was so fortunate as to find, on Saturday last, a large flint implement of palæolithic make. The implement is seven inches in length, slightly convex, and chipped on the outer curve with three longitudinal faces; consequently it has four working edges. At the butt end an echinus, or sea urchin, is embedded in the flint.

IN some excavations which have recently been undertaken during the construction of the continuation of the Thames embankment westwards, some probably prehistoric remains have been brought to light, which include a human lower jawbone with all the teeth present. At about the same spot a flint knife was discovered and other animal remains, some mixed with freshwater shells.

IN the Proceedings of the Bristol Naturalists' Society (Vol. I. Part ii.) will be found the translation, by Dr. Frupp, of a valuable paper by Dr. E. Abbe, of Jena, entitled, "A Contribution to the Theory of the Microscope, and the Nature of Microscopic Vision."

THE University of California has organised a summer exploring party, which will be occupied about nine weeks in journeying through the Sierra Nevada Mountains in Mariposa, Mono, and Inyo counties, and will bestow particular attention to geology, palæontology, and mineralogy. The party will be in charge of Dr. Joseph Le Conte, assisted by Mr. Henry Edwards, Mr. F. P. M'Lean, and Mr. F. Slate.

SIR CHARLES LOCOCK, Bart., F.R.S., First Physician-Accoucheur to the Queen, died on Friday last, at the age of seventy-six years.

THE British Archæological Association meets this year at Evesham, on Monday, August 16, when the President, the Marquis of Hertford, will deliver the inaugural address.

A REUTER'S telegram states that an attack has been made on the Palestine exploring party, none of whom have, however, been hurt. The assailants were repulsed.

THE rector of the Catholic University of Louvain (Belgium) has gone to Paris in order to consult with the ecclesiastics now engaged in preparing to establish a Catholic University in that city. The site has been already chosen, and is close to the place where *La Bastille* was erected during the old Monarchy. The liberals are not likely to establish a University of their own, if the existing University satisfies their principal claims.

A CAPITAL weekly journal, the *Electrical News and Telegraphic Reporter*, whose first appearance we intimated a few weeks ago, has just completed the first month of its existence. It is edited with care and ability by Mr. Crookes, and is uniform in size and price with the *Chemical News*. In the number for July 22 there are nine articles of considerable scientific value and others of no less general interest. We notice especially the paper on Quadruplex Telegraphy and the Telegraph in China. The notes are interesting, and the reports of electrical science from the foreign journals are well done. We are glad to be able to bring this useful journal under the notice of our readers.

AN examination will be held at Exeter College, Oxford, on Thursday Oct. 14, for the purpose of election to two scholarships in Natural Science, of the annual value of 80*l.* each, tenable for five years.

WE have received the "Second Appendix" to the "Flora of Liverpool," issued by the members of the Field Club. It contains additional habitats for many species, and also includes several species not previously recorded as growing in the district, some of them of considerable rarity, as: *Ranunculus fluitans*, *Barbarea stricta*, *Carduus nutans*, *Doronicum Pardalanchæ*, *Cuscuta Europæa*, *Mentha rubra*, *Stachys ambigua*, *Atriplex triangularis*, *Rinnes pratensis*, *Alisme nutans*, *Carex divulsa*, *axillaris* and *fulva*. Local "floras" are becoming so numerous now, and the directions for finding certain plants so minute, that there is some point in the remark of a facetious foreign professor of botany, who said that we should soon have have all our British plants separately labelled. This defect (in our opinion) is rather conspicuous in the Appendix to the Flora of Liverpool. It may be desirable to know something about the number of individuals of exceedingly rare though undoubtedly indigenous species.

MR. DALL has presented a report to the United States Coast Survey on the tides, currents, and meteorology of the Northern Pacific. He finds proof of the existence of a northerly current, denominated by him "the Alaska current," which had previously been surmised.

VOL. VI. of Mr. F. V. Hayden's Report of the U.S. Geological Survey consists of a monograph, by Mr. Leo Lesquereux on the Cretaceous Flora of the Western Territories, profusely illustrated. Mr. H. Gannett, under the same direction, has issued the third edition of a List of Elevations west of the Missouri River.

THE additions to the Zoological Society's Gardens during the past week include, a Chimpanzee (*Troglodytes niger*) from W. Africa, presented by Capt. Lees, Governor of Lagos, W. Africa; three Amherst Pheasants (*Thaumalea amherstii*); a Geoffroy's Blood Pheasant (*Ithaginis Geoffroyii*) and five Temminck's Tragopans (*Cerionis Temminckii*) from China, deposited; a Sambar Deer (*Cervus aristotelis*), two Brown Indian Antelopes (*Tetracerus subquadriconutus*) from India, a Tora Antelope (*Alcelaphus tora*) from Upper Nubia, an Elate Hornbill (*Buceros elatus*), an Electric Silurus (*Melapterurus beninensis*) from W. Africa, a Naked-throated Bell Bird (*Chasmorhynchus nudicollis*), a Pectoral Tanager (*Ramphocelus brasilius*), a Festive Tanager (*Calliste festiva*) from Brazil, purchased.